

IN THE CLAIMS:

1. (canceled)
2. (previously presented) The vessel filter of claim 21, wherein the filter is composed of a singular tube having cutouts therein forming the plurality of longitudinal struts.
3. (previously presented) The vessel filter of claim 21, wherein the mounting section includes a plurality of longitudinally extending struts.
4. (previously presented) The vessel filter of claim 21, wherein portions of the filter connecting the first and second end of the mounting sections to the respective converging region angle radially inwardly and toward a center of the filter to direct particles toward the center.
5. (original) The vessel filter of claim 3, wherein the longitudinal struts include roughened surfaces to engage the vessel wall to increase retention.
6. (original) The vessel filter of claim 3, further comprising a plurality of vessel engaging members with pointed ends extending from the longitudinal struts to engage the vessel wall to increase retention.
7. (previously presented) The vessel filter of claim 21, wherein the filter is composed of shape memory material.
8. (previously presented) The vessel filter of claim 3, wherein opposing ends of at least one of the longitudinal struts are out of phase.
9. (original) The vessel filter of claim 3, wherein the longitudinal struts are spaced circumferentially about 60 degrees apart.
10. (canceled)

11. (previously presented) The vessel filter of claim 21, wherein at least one of the struts has varying widths along its length, a portion of the strut substantially parallel to the longitudinal axis having a first width and an angled portion of the strut having a second width less than the first width.

12. (canceled)

13. (previously presented) The vessel filter of claim 22, wherein the longitudinal struts include a plurality of vessel engaging members extending therefrom to engage the vessel wall to increase retention.

14. (previously presented) The vessel filter of claim 22, wherein the filter is composed of a shape memory tubular material having cutouts therein.

15. (previously presented) The vessel filter of claim 22, wherein end portions of at least one of the longitudinal struts are twisted out of phase.

16. (previously presented) The vessel filter of claim 22, wherein the portion extending radially inwardly of at least one of the longitudinal struts has a width different than a longitudinally extending portion of the strut.

17. (canceled)

18. (currently amended) A method of implanting a vessel filter in a patient's body to direct particles to the center of the filter while enabling blood flow through the filter, the method comprising the steps of

providing a vessel filter having a longitudinal axis having a center point, a plurality of struts defining a mounting section and first and second filtering sections each terminating in a converging end region into a respective first proximal and second distal tubular portion, each of the plurality of struts extending substantially parallel to the longitudinal axis to engage a vessel wall and curving inwardly and including a linear portion extending radially and axially inwardly to the respective filtering section, the filter including first and second ribs extending from adjacent parallel struts and terminating at a joined region forming an unattached free end;

providing a tubular delivery member containing the vessel filter in a collapsed configuration having a first diameter;

inserting the vessel filter in the collapsed configuration adjacent a surgical site;

deploying the vessel filter from the delivery member so the vessel filter, without application of an external force, moves to a placement configuration having a diameter larger than the first diameter and the proximalmost end point of the first proximal tubular portion and the distalmost end point of the second distal tubular portion are axially aligned with respective linear portions and are closer to the center of the longitudinal axis of the filter than each of the respective proximalmost and distalmost end points of each of the struts of the mounting section to direct particles along a linear path at an angle to the longitudinal axis toward the center of the filter in the path of greater blood flow through the filter, the vessel filter being composed of shape memory material and movement of the vessel filter to the placement configuration moves the vessel filter towards a memorized configuration; and

after a period of time after insertion of the filter, removing the implanted vessel filter from the patient's body.

19. (canceled)

20. (canceled)

21. (currently amended) A vessel filter comprising a center, a first portion distal of the center of the filter and a second portion proximal of the center and a longitudinal axis, wherein

the first portion has a plurality of struts defining a first mounting section, the struts having a distalmost end point, and a first filter section spaced proximal of the distalmost end points of the struts of the first mounting section, the first filter section converges into a first converging region terminating in a distal tubular portion;

the plurality of struts defining a second portion having a second mounting section, the struts having a proximalmost end point, and a second filter section spaced distal of the proximalmost end points of the struts of the second mounting section, the second filter section terminating in a second converging region terminating in a proximal tubular portion, the first and second mounting portions formed by longitudinally extending struts having first and second ribs extending from adjacent longitudinally extending struts and terminating at a joined region forming an unattached free end;

in a vessel placement position of the filter, a distalmost end point of the distal tubular portion is radially inward and proximal of the distalmost end points of each of the struts of the first mounting section and a proximalmost end point of the proximal tubular portion is radially inward and distal of the proximalmost end points of each of the struts of the second mounting section, the portion joining the first mounting section and first filter section and joining the second mounting section and second filter section of each of the struts including a linear portion extending radially and axially inwardly and extending from a first curved portion at one end to a second curved portion at an opposing end, the linear portion having a length greater than a length of each of the first and second curved portions and the proximalmost end point of the proximal tubular portion and the distalmost end point of the distal tubular portion are axially aligned with a region of each of the linear portions of the respective second filter section and first filter section.

22. (currently amended) An apparatus comprising a vessel filter comprising a tubular member having a central longitudinal axis with a center point along the axis and having a plurality of cutouts formed therein forming a series of spaced apart struts and movable between a first insertion configuration and a second deployed configuration, in the second configuration the struts extend substantially longitudinally and form a mounting section extending from a first proximalmost end point to a second distalmost end point, the struts having first and second curved ribs extending from adjacent struts and terminating at a joined region forming an unattached free end, the struts further extending from the first proximalmost end point and from the second distalmost end point radially inwardly towards the center point of the filter to form first and second filtering sections terminating in first proximal and second distal tubular portions, the radially inwardly extending struts each having a linear portion extending from a first curved portion at a first end and transitioning to a second curved portion at a second end, each of the struts of the first filtering section terminating in a distalmost end point and each of the struts of the second filtering section terminating in a proximalmost end point, wherein in the second configuration the proximalmost end points of each of the struts in the mounting section is proximal of a proximalmost end point of the first proximal tubular portion and the distalmost end points of each of the struts in the mounting section is distal of a distalmost end point of the second tubular portion to direct particles along the linear portion of struts to the center of the filter and toward the central longitudinal axis in the path of greater blood flow through the filter, the filter moving to such second configuration without application of an external force to the filtering sections.